

Remarks/Arguments:

Claims 10-24 are currently pending in the application. In the Final Office Action dated August 31, 2006, claim 24 was rejected under 35 U.S.C. § 112 based on matters related to form. Claims 10-18, 20, 21, 23 and 24 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 3,448,831 ("Newstead"). Claims 10-24 were also rejected under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 6,044,935 ("Mery et al.") in view of German Patent DE3605788 ("Reeb et al."). Claim 19 and 22 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Newstead in view of presumptions regarding knowledge of persons skilled in the art.

This response is being filed concurrently with a Request for Continued Examination (RCE). Accordingly, Applicants respectfully request withdrawal of the final rejection. Claims 10-24 are cancelled without prejudice to focus examination on newly added claims 25-41, discussed below. Applicants reserve the right to pursue the cancelled claims in subsequent amendments and/or applications.

One of the major advantages offered by Applicants' brake is a guiding component in certain embodiments that controls movement of not only the brake pads, but the actuating devices that apply the brake pads (e.g. pistons, cylinders, etc.) as well. This common guiding component that controls movement of both the pads and the actuating devices eliminates the need for the tie rods and other complicated assemblies shown in the cited references. The guiding component may include, for example, a brake holder arm that supports lateral guiding extensions extending from the brake pads and actuating devices along a single recess. This feature is described in more detail in applicant's specification at pages 5 and 11, among other sections. Applicants respectfully submit that the use of a common guiding component for both the brake pads and actuating devices is not described in any of the cited references.

Another important feature of Applicants' brake is the use of two different-sized pistons in certain embodiments to compensate for wear on the outermost brake pad. The selection of different sized pistons is not simply a design choice based on the distance between the discs, as presumed in the Final Office Action. The size difference corresponds to the amount of wear on the outermost brake pad, and the resultant shift of the second actuating device relative to the discs. As explained on pages 6 and 14 of the specification, the position of the second actuating device and cylinder relative to the caliper moves inwardly as the outermost brake pad wears down. This increases the relative distance in which piston pointing to the outer brake pad must move. To compensate for this change, the piston pointing to the outer brake pad is made

longer by a certain amount. At the same time, the other piston in the cylinder, i.e. the piston pointing to the inner brake pad, is made shorter for tolerance compensation, keeping the overall size of the second actuating device shorter. This arrangement for compensating wear while minimizing space requirements is not addressed in any of the cited references.

New claim 25 recites a disc brake comprising a pair of friction rings arranged on a rotatable hub and fixed at an axial distance from each other, a brake holder, and a plurality of brake pads, the brake pads being displaceably arranged on both sides of each friction ring, a brake caliper straddling the friction rings and brake pads, a first actuating device disposed in the brake caliper at one side of one of the friction rings, and a second actuating device that is arranged between the friction rings, the brake holder having at least one axially extending recess, the brake pads and the second actuating device each comprising a lateral guide extension received in the recess, the lateral guide extensions of the brake pads and second actuating device being radially supported in the recess and axially displaceable in the recess to permit axial movement of the brake pads and second actuating device with respect to brake holder.

New claim 34 recites a disc brake comprising a pair of friction rings arranged on a rotatable hub and fixed at an axial distance from each other, a brake holder, and a plurality of brake pads, the brake pads being displaceably arranged on both sides of each friction ring, a brake caliper straddling the friction rings and brake pads, a first actuating device disposed in the brake caliper at one side of one of the friction rings, and a second actuating device that is arranged between the friction rings, the second actuating device being housed in a connection integrally formed with the caliper, the brake holder having at least one axially extending recess, the brake pads each comprising a lateral guide extension received in the recess, the lateral guide extensions of the brake pads being axially guided in the recess to permit axial movement of the brake pads with respect to the brake holder, the second actuating device comprising a first piston and a second piston, the first and second pistons axially aligned with one another and carried in a cylinder fixedly connected with the caliper, the first piston being axially displaceable against a first of said friction rings and the second piston being axially displaceable against a second of said friction rings, wherein the first piston has an axial length that exceeds an axial length of the second piston by an amount sufficient to compensate for axial displacement of the caliper due to wear of the brake pads.

New claim 37 recites a disc brake comprising a pair of friction rings arranged on a rotatable hub and fixed at an axial distance from each other, a brake holder, and a plurality of brake pads, the brake pads being displaceably arranged on both sides of each friction ring, a

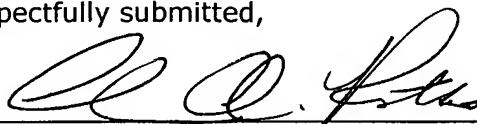
brake caliper straddling the friction rings and brake pads, a first actuating device disposed in the brake caliper at one side of one of the friction rings, and a second actuating device that is arranged between the friction rings, the brake holder having at least one axially extending recess, the brake pads each comprising a lateral guide extension received in the recess, the lateral guide extensions of the brake pads being axially displaceable in the recess to permit axial movement of the brake pads with respect to brake holder, the second actuating device being housed in a connection integrally formed with the caliper in an integral cast piece, wherein the integral connection contains a large diameter piston axially displaceable against a first friction ring in a first direction, and a pair of smaller diameter pistons axially displaceable against a second friction ring in a second direction opposite the first direction, the pistons disposed in a parallel arrangement.

Support for new claim 25 may be found on pages 10-11 of the specification, among other sections. Support for new claim 34 may be found on pages 6, 10-11 and 13-14 of the specification, among other sections. Support for new claim 37 may be found on pages 10-11 and 15 of the specification, among other sections. No new matter has been added by any of the new claims.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit favorable consideration of new claims 25-41, which are believed to be allowable over the prior art. If the Examiner believes that any issues remain regarding the allowability of the application, and that these issues can be resolved through discussion, the Examiner is encouraged to contact the undersigned attorney at (610) 407-0700.

Respectfully submitted,



Robert P. Seitter, Reg. No. 24,856
Christopher A. Rothe, Reg. No. 54,650
Attorneys for Applicants

RPS/CAR/dhm

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PO. Box 980
Valley Forge, PA 19482
(610) 407-0700

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Dorise Maye